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ABSTRACT

This paper seeks to answer some of the questions asked by teachers and principals when a proposal for a token reinforcement system is introduced at a public school. The question of cost should not be a deterrent, since a well-planned token system puts little financial strain on a school, and the transition from tokens to social reinforcers can take place within 3 to 4 months without loss of appropriate behavior. At present, token systems should be undertaken on a pilot study basis in order to generate progress and evaluation data on the children involved. Necessary consultation time is not excessive when compared to therapist hours spent in traditional therapeutic centers. Teachers need not worry about the amount of time spent in the actual dispensing of tokens in the classroom, because the small amount of time it takes is more than made up for by time saved correcting inappropriate behaviors. A token reinforcement program can improve classroom behaviors but can only enhance academic behavior when academic materials are adequately presented. Bolstering the students' confidence, involving the parents, and providing reinforcement for teachers and administrators are also important elements in the success of a token program. Recommendations are given for the establishment of an effective token system. (MH)

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ESTABLISHING TOKEN PROGRAMS IN SCHOOLS:

ISSUES AND PROBLEMS

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O'Leary

Any attempt to establish a token reinforcement program in a public school will prompt a barrage of questions from principals and teachers. Some of these questions are little more than reflections of resistance to change, but others are well-intentioned and often probe at the critical issues inherent in a token program. It is to the latter type of question that my presentation will be directed. Since a large proportion of you may be deciding whether or not to establish a token program in your schools, I will try to answer questions frequently posed by administrators and teachers themselves when proposals for token programs are presented to them.

The questions posed by principals frequently concern cost, necessary consulting time, teacher training, and probability of success. Let us discuss the cost of reinforcers first. Consider a class of 15 disruptive children in an elementary school. If they all received back-up reinforcers worth 25¢ every day for one month (20 school days), then received 40¢ prizes every other day for one month, received 60¢ prizes every third day for one month, and finally received $1.00 prizes every fifth day for one month, the cost of back-up reinforcers would be less than $300.00 for a four month program.[1] If the aim of the project director is to transfer control from back-up reinforcers such as candy and toys to praise and other social reinforcers, one should make a transition to social reinforcers as soon as possible. From my own experience with children from first to fourth grade, such a transition could certainly be made within 3 to 4 months without loss of appropriate behavior.

[1]One might use less expensive back-up reinforcers and quickly increase the behavioral criterion required for various reinforcers in order to maximize the possibility of maintaining prosocial behavior after the tangible back-up reinforcers are withdrawn.

In a junior or senior high school the transition to social reinforcers would probably take longer and the cost of back-up reinforcers would undoubtedly be greater. However, McKenzie et al (1968) have significantly changed the academic behaviors of ten to thirteen year old children in a learning disabilities class by using grades as tokens and allowances as back-up reinforcers. The parents managed the exchange of tokens for back-up reinforcers under supervision of the experimenters, and since the parents were accustomed to giving their children allowances, neither parents nor the school assumed added costs.

Although some school systems or organizations like the PTA, the Rotary, and Kiwanis have provided for the cost of back-up reinforcers for children, most published studies of token reinforcement programs have had government or university research funds cover such costs. The use of token programs has grown dramatically, but because of the dearth of outcome and follow-up research with token programs in classrooms, it seems best to continue to have the cost of back-up reinforcers covered by research funds where possible. In fact, it is my contention that any token program would be best conducted on a research or "pilot study" basis--even if it is not the intention of the psychologist to publish his results. Having an observer or teacher keep some records of the child's progress provides all people concerned with constant feedback and evaluation about the effectiveness of the program--one of the most beneficial effects of the whole behavior modification thrust.

Administrators and teachers will also wish to know about the necessary consultation time. It is of prime importance that a token program get off to a good start and I suggest that any program receive at least one hour of consultation time per day during the first week

of the program from someone knowledgeable in the application of learning principles to classroom management. The consultation time could then gradually taper off to two hours per week. Compared to the number of therapist hours spent in more traditional therapeutic centers where children are seen individually outside the classroom setting, such consulting time is probably an extremely effective use of professional services.

It has been demonstrated that teachers can use a token program and effect some change in children's behavior without participating in a course in learning principles or without having extensive consultation (Kuypers, Becker, & O'Leary, 1968). However, care must be taken not to rely solely on the "heavy duty" back-up reinforcers since only partial change will result. Token and back-up reinforcement is but <u>one</u> method of producing change in the children's behavior, and it is critical that attention be paid to the types of cues, threats, and frequency and consistency social reinforcement the teacher uses on a minute to minute basis. Particularly important is the effective shaping of the children's behavior in the time between the distribution of ratings or token reinforcers. In addition, adherence to the rules concerning exchange of back-up reinforcers is critical. Several years ago I dealt with a teacher who became so frustrated with the children that she occasionally allowed them to take any back-up reinforcers--regardless of the amount of token reinforcement. As you might guess, the program had little effect on the children's behavior.

The amount of time a teacher has to spend in giving out the token and back-up reinforcers may be a teacher's greatest concern. Even where we used ratings which were placed in children's booklets every

20 or 30 minutes, the amount of time it took the teacher to place a rating in each of 20 children's booklets and give just a few words of feedback to each child was only 3 to 4 minutes. Furthermore, we have found that after a token program has been in effect, the teacher can use less aversive control and spend less time in simple classroom management. Thus, the initial time spent in giving ratings and exchanging back-up reinforcers may be well worth the effort. It also should be emphasized that simply having the teacher send home a statement about the child's good behavior or giving the child a plastic token which the parent knows is indicative of good behavior can be used to effectively change a child's classroom behavior with a minimum amount of effort and time.

Questions about the probability of success of such a program are much more difficult to answer. From a review of token programs now being completed by Ron Drabman and myself, I would estimate roughly that 70 to 80% of the children in a token program in a preschool or elementary school class for emotionally disturbed, retarded, or educationally disadvantaged children would show significant gains in appropriate social behavior and that these gains would be appreciably greater than those shown by control children in a regular special education class (O'Leary & Becker, 1967; O'Leary, Becker, Evans, & Saudargas, 1969). With regard to academic improvement--and particularly to changes on standardized tests--conclusions are more difficult to make, but studies by Birnbrauer, Bijou, Wolf, & Kidder, 1965; Hewett, Taylor, & Artuso (1969); Miller & Schneider, 1969; Walker, Mattson & Buckley (1968), and Wolf, Giles, & Hall (1968) suggest that academic behaviors per se can indeed be significantly enhanced by a token program. However, it should be

emphasized that a token program is no panacea for increasing the academic repertoire of children. A token reinforcement program is a means of effectively reinforcing behavior, but any token program is intrinsically bound to the adequacy of the presentation of academic materials. In a sense, a token program is an emergency device for prompting and maintaining academic and social behavior but it tends to remain a prosthetic device if the presentation of academic material is boring and poorly programmed.

It has been quipped that behaviorally oriented psychologists are wart removers while analytically oriented psychologists are the heart surgeons of psychological problems. This remark may be particularly relevant to men who apply token programs but worry little about academic programs and the factors that will control the child's behavior after he has graduated from the token program. With regard to this issue of generalization, the question posed by an administrator or teacher is simply: What will happen when the token program is withdrawn? The answer to that question is straightforward. If special procedures are not devised specifically to maintain the children's appropriate behavior when the program is withdrawn, the children's appropriate behavior will decline. On the other hand it appears that if some procedures are followed, the appropriate behavior of the children can be maintained after the formal token program is withdrawn. Because the problem of maintaining gains in a token program is presently such a key issue, a number of suggestions for enhancing long term effects of token programs will follow:

1. Provide a good academic program since in many cases you may simply be dealing with deficient academic repertoires--not"behavior disorders."

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2. Give the child the expectation that he is capable and that his good behavior is the result of his own efforts. This suggestion has been amply followed in the Engelmann-Becker Follow-Through Program where immediately following a child's correct answer, the teacher very enthusiastically says "Yes, that's a smart answer; you're a smart boy!" In this regard, it should also be emphasized that the teacher should convey an attitude that she feels or expects the token system to work and succeed.

3. Have the children aid in the selection of the behaviors to be reinforced, and, as the token program progresses, have the children involved in the specification of contingencies--a procedure effectively used by Lovitt & Curtiss, (1969). For example, the child rather than the teacher could specify the amount of recess he should earn for a certain number of correct responses.

4. Teach the children to evaluate their own behavior.

5. Try in every way possible to teach the children that academic achievement will pay off. For example, pick something you know a child likes, eg. clothes, and tell him how he will be able to buy many nice clothes if he studies hard and gets a good job.

6. Involve the parents. Most published studies on token programs in classrooms have not involved parents--probably for reasons of experimental control. However, I have not yet been involved in a token program where it was not thought that its long term effectiveness could have been enhanced by parent involvement. The effective use of parents in school-related token programs has been well illustrated by McKenzie, Clark, Wolf, Kothera, & Bensen (1968) and by Walker, Mattson & Buckley (1968).

7. Withdraw the token and the back-up reinforcers gradually, and utilize other reinforcers existing within the classroom setting such as privileges, recess, and peer competition, eg. boys vs. girls and group contingencies.

8. Reinforce the children in a variety of situations and reduce the discrimination between reinforced and non-reinforced situations. Most of the evidence at this point strongly suggests that behavior is very situation specific and when it is clear to the children that their behavior pays off in one situation but not in another, they behave accordingly.

9. Prepare teachers in the regular class to praise and shape children's behavior as they are phased back into the regular classes, and bolster the children's academic behavior--if needed--with tutoring by undergraduates or parent volunteers.

10. Last, in order to maintain positive gains from a token program it may help to look at the school system as a token system writ large with a whole chain or sequence of responses and reinforcers from the children to the teacher, to the principal, to the school superintendent, and finally to the school board. When viewed in such a manner, the consultant or research investigator should attempt to facilitate the process of reinforcement not only for the children but for the teachers, the principal, and the school board. Praise to a teacher from a principal, frequent feedback and follow-up results given to the principal from the investigator, and some publicity about the program in local papers sent especially to school board members are but a few examples of the types of interactions which may serve to maintain interest

in both the long and short term effects of token programs.[2]

In conclusion, a word of encouragement and a word of caution is in order. First, there definitely are a number of studies which demonstrate that a token program can be successful in changing the behavior of children in a classroom. However, a token program is but one of a variety of techniques which can be used to help a teacher. Because of the problems of withdrawal of token and back-up reinforcers, other procedures should be tried first, such as making rules clear, using praise and shaping, ignoring some disruptive behavior, diminishing the use of threats and verbal reprimands, and focusing on a good academic program. Where such procedures fail and where there is a great deal of peer reinforcement for disruptive behavior (not just one or two disruptive children in a class), a token program may well be a very useful procedure for you.

[2]Consulting fees paid to the teachers for their extra time commitment, university course credit, daily feedback concerning the behavior of the teacher and the children, frequent discussion with the teacher by the principal investigator, and modeling and rehearsal of appropriate teacher behavior have been especially effective for us in gaining control of teacher's behavior.

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